Center Independent Research & Development: JPL IRAD

Ka Band Parabolic Deployable Antenna (KaPDA) for Interplanetary CubeSat Communications

Completed Technology Project (2013 - 2017)

Project Introduction

This task will develop a prototype 0.5 m Diameter Ka Band Parabolic Deployable Antenna (KaPDA) for Interplanetary CubeSat Communications.

Ka Band Parabolic Deployable Antenna (KaPDA) for Interplanetary CubeSat Communications allowing moving up from UHF, S or X to get higher gain for a given diameter.

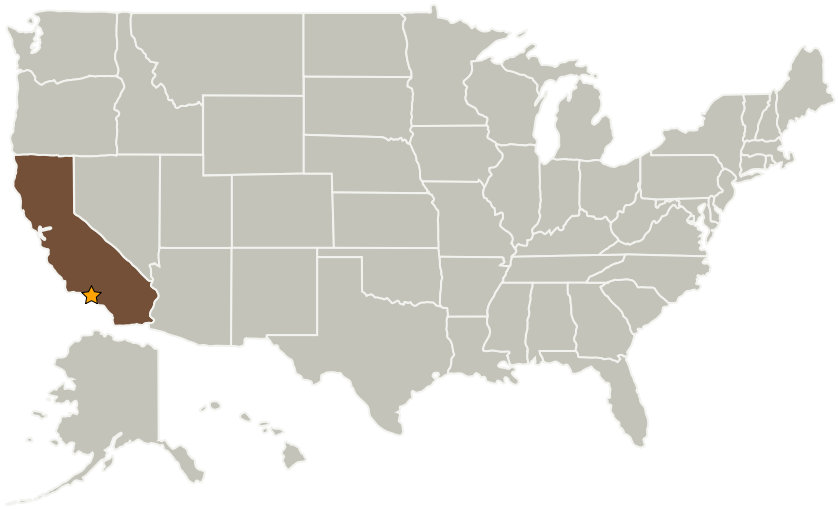
Anticipated Benefits

Increased science return

Increased competitiveness and data return for smallsats

Increased data return for smallsats

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Jet Propulsion Laboratory(JPL)	Lead Organization	NASA Center	Pasadena, California

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Primary U.S. Work Locations

California

Organizational Responsibility

Responsible Mission Directorate:

Mission Support Directorate (MSD)

Lead Center / Facility:

Jet Propulsion Laboratory (JPL)

Responsible Program:

Center Independent Research & Development: JPL IRAD

Project Management

Program Manager:

Fred Y Hadaegh

Project Manager:

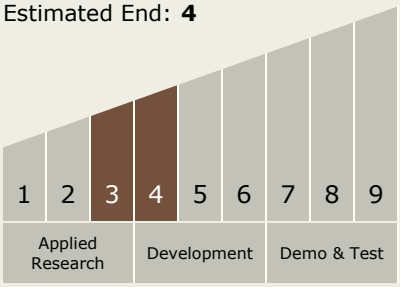
Jonas Zmuidzinas

Principal Investigator:

Mark W Thomson

Technology Maturity (TRL)

Start: **3**
Estimated End: **4**



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Technology Areas

Primary:

- TX05 Communications, Navigation, and Orbital Debris Tracking and Characterization Systems
  - TX05.2 Radio Frequency
    - TX05.2.6 Innovative Antennas